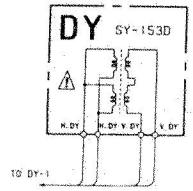
SONY

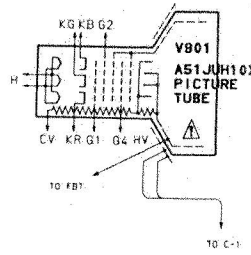
KV-2162M9

RM-677C

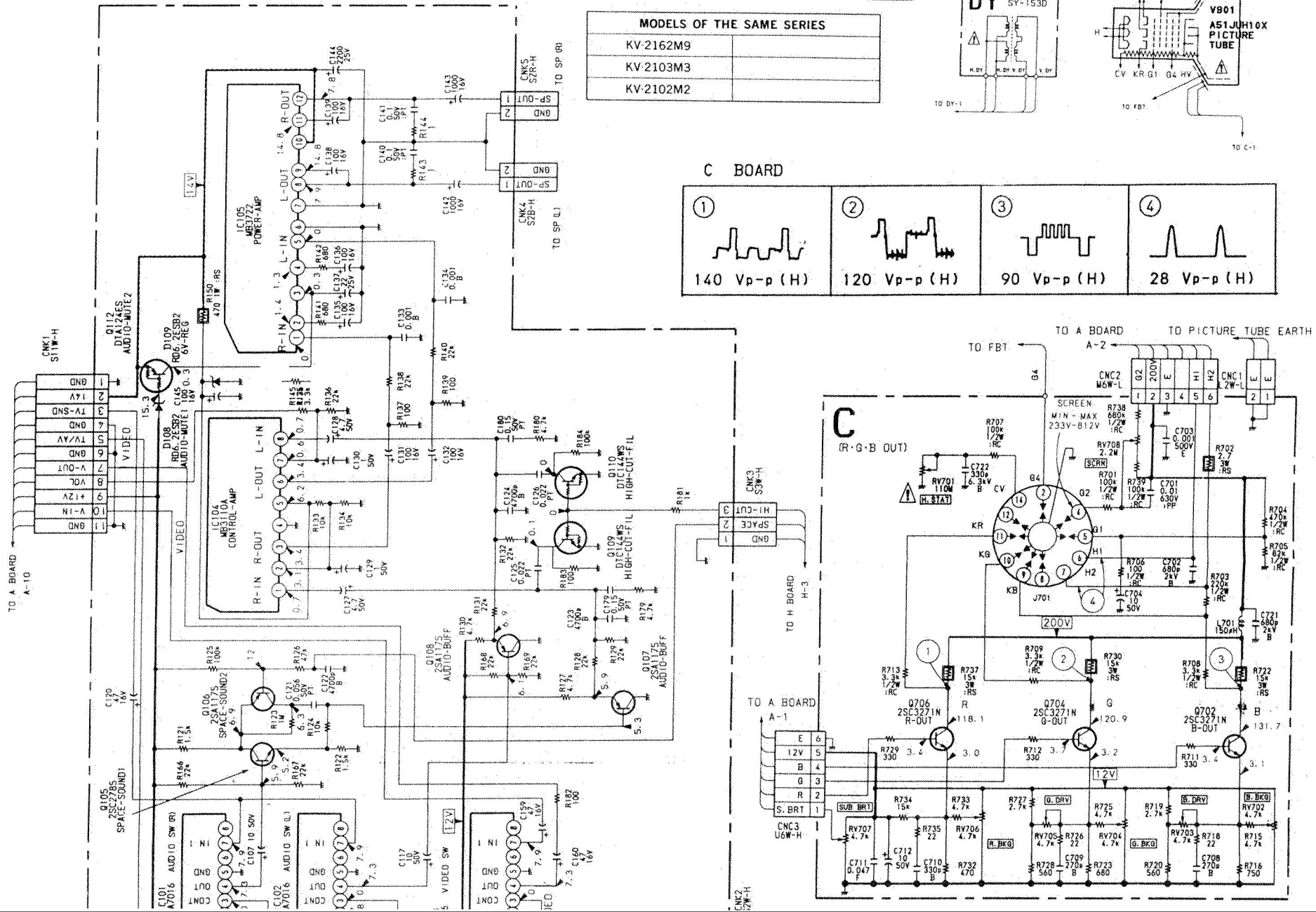
GP-1S CHASSIS

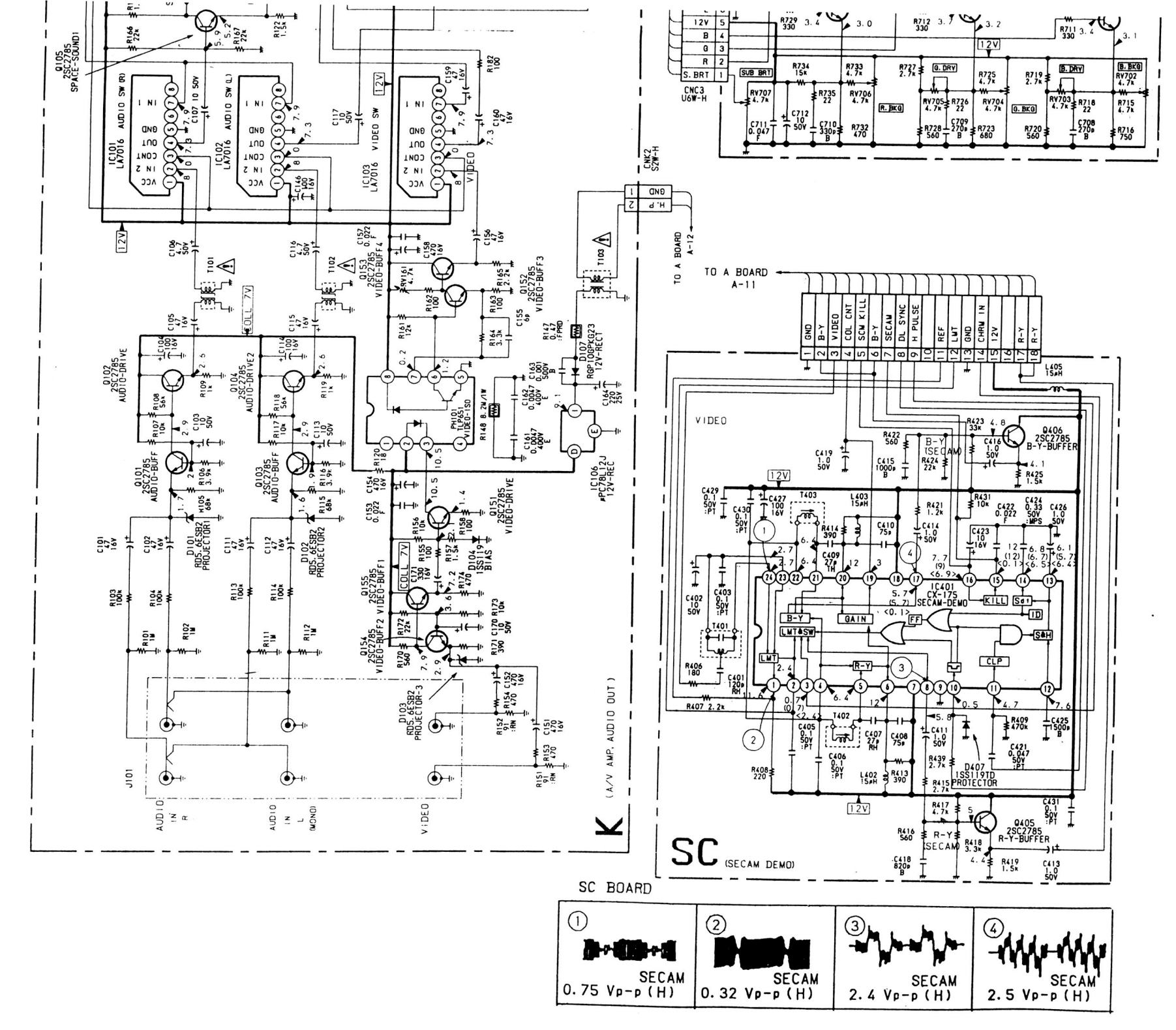
MODELS OF THE SAME SERIES	
KV-2162M9	
KV-2103M3	
KV-2102M2	





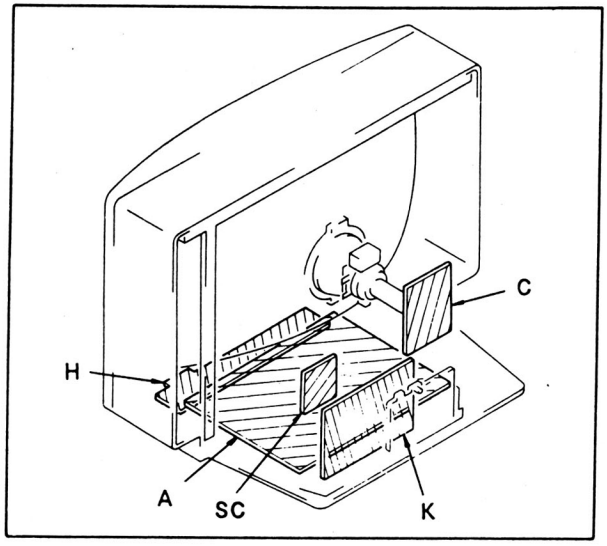
C BOARD




SC (SECAM DEMO)
SC BOARD
(A/V AMP. AUDIO OUT)
TO A BOARD A-11
TO A BOARD A-12
SECAM 0.75 Vp-p (H)
SECAM 0.32 Vp-p (H)
SECAM 2.4 Vp-p (H)
SECAM 2.5 Vp-p (H)

SECTION 5
DIAGRAMS

5-1. CIRCUIT BOARDS LOCATION



Note:

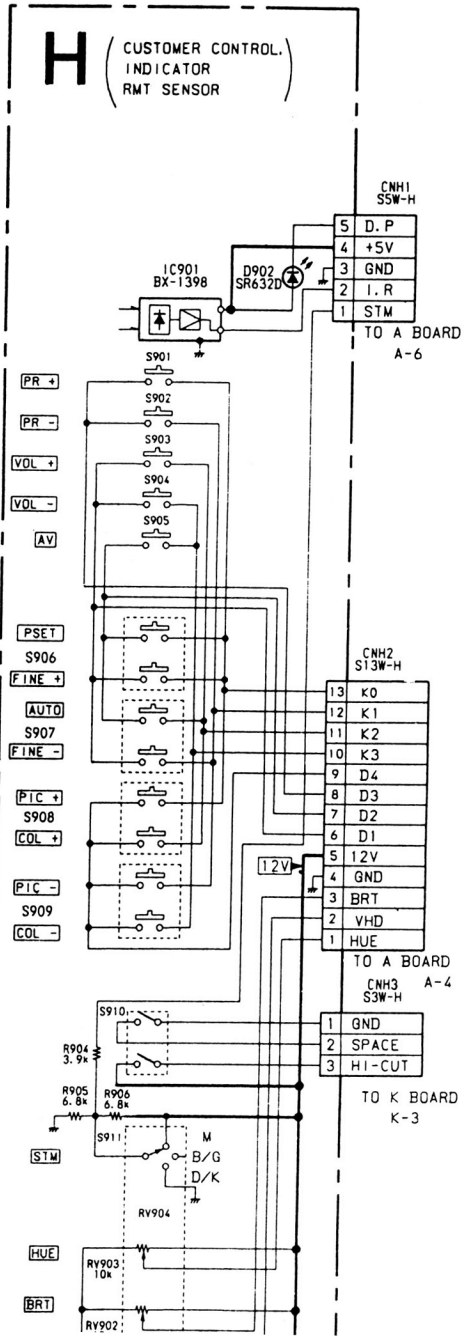
- All capacitors are in μF unless otherwise noted.
  50WV or less are not indicated except for electrolytics.
  p : μμF
- Indication of resistance, which does not have one for rating electrical power is as follows.

Pitch	: 5mm
Rating electrical power	: 1/4W

  kΩ : 1000Ω, MΩ : 1000kΩ
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- : nonflammable resistor.
- : fusible resistor.
- △ : internal component.
- : panel designation.
- : adjustment for repair.
- : B+ bus.
- : Signal path.
- Voltages are dc with respect to ground unless otherwise noted.
- Readings are taken with a 10 MΩ digital multimeter.
- Voltage variations may be noted due to normal production tolerances.
- Readings are taken with a color-bar-signal input.
  no mark : with PAL color-bar signal received.
  ( ) : with NTSC color-bar signal received.
  < > : with SECAM color-bar signal received.

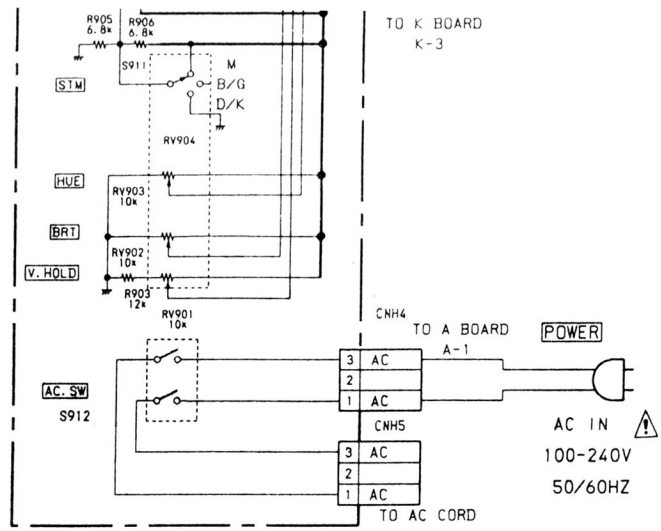
Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

5-2. SCHEMATIC DIAGRAM AND PRINTED WIRING BOARDS



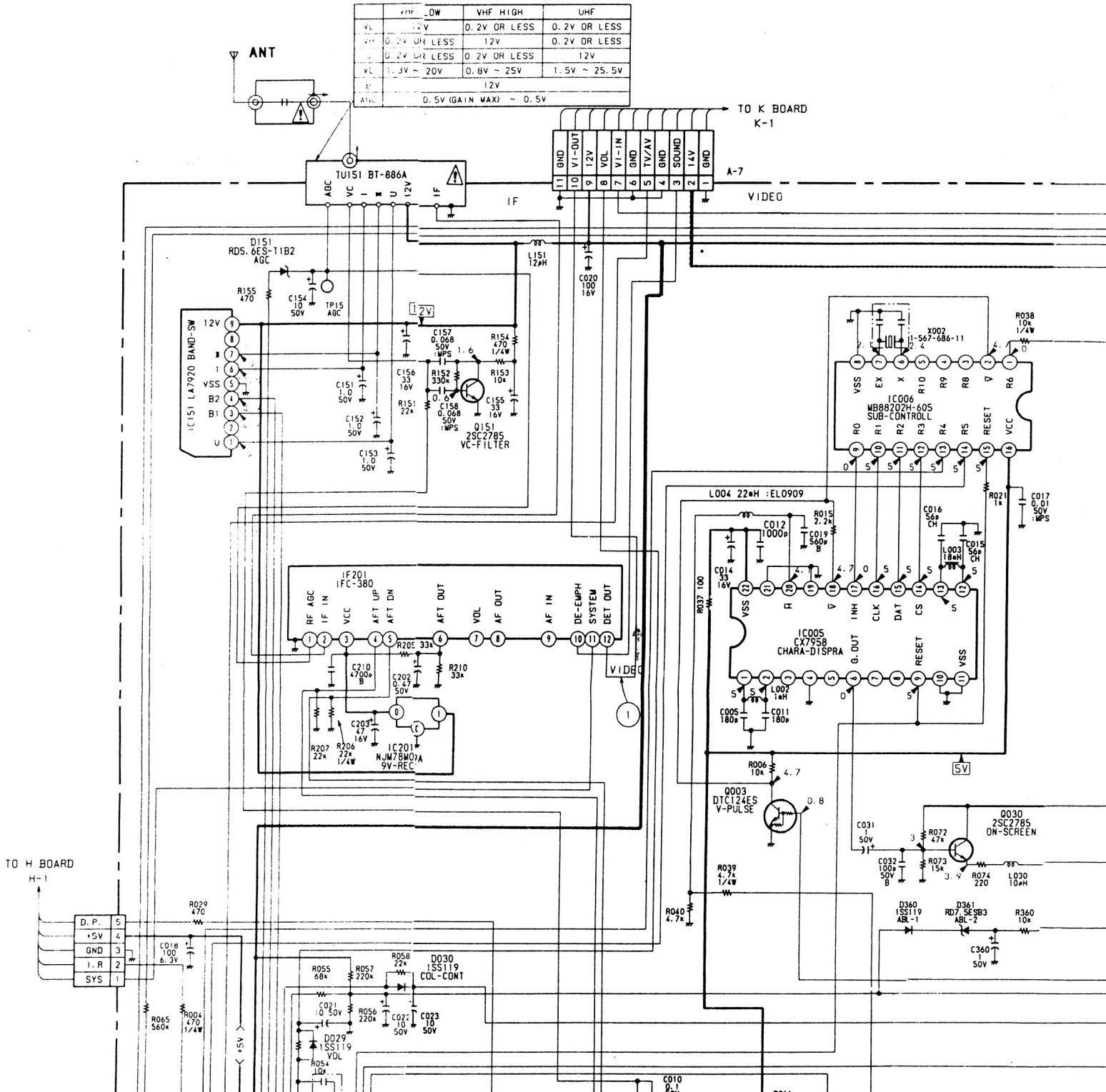
- Voltage variations may be noted due to normal production tolerances.
- Readings are taken with a color-bar-signal input.
  no mark : with PAL color-bar signal received.
  ( ) : with NTSC color-bar signal received.
  < > : with SECAM color-bar signal received.

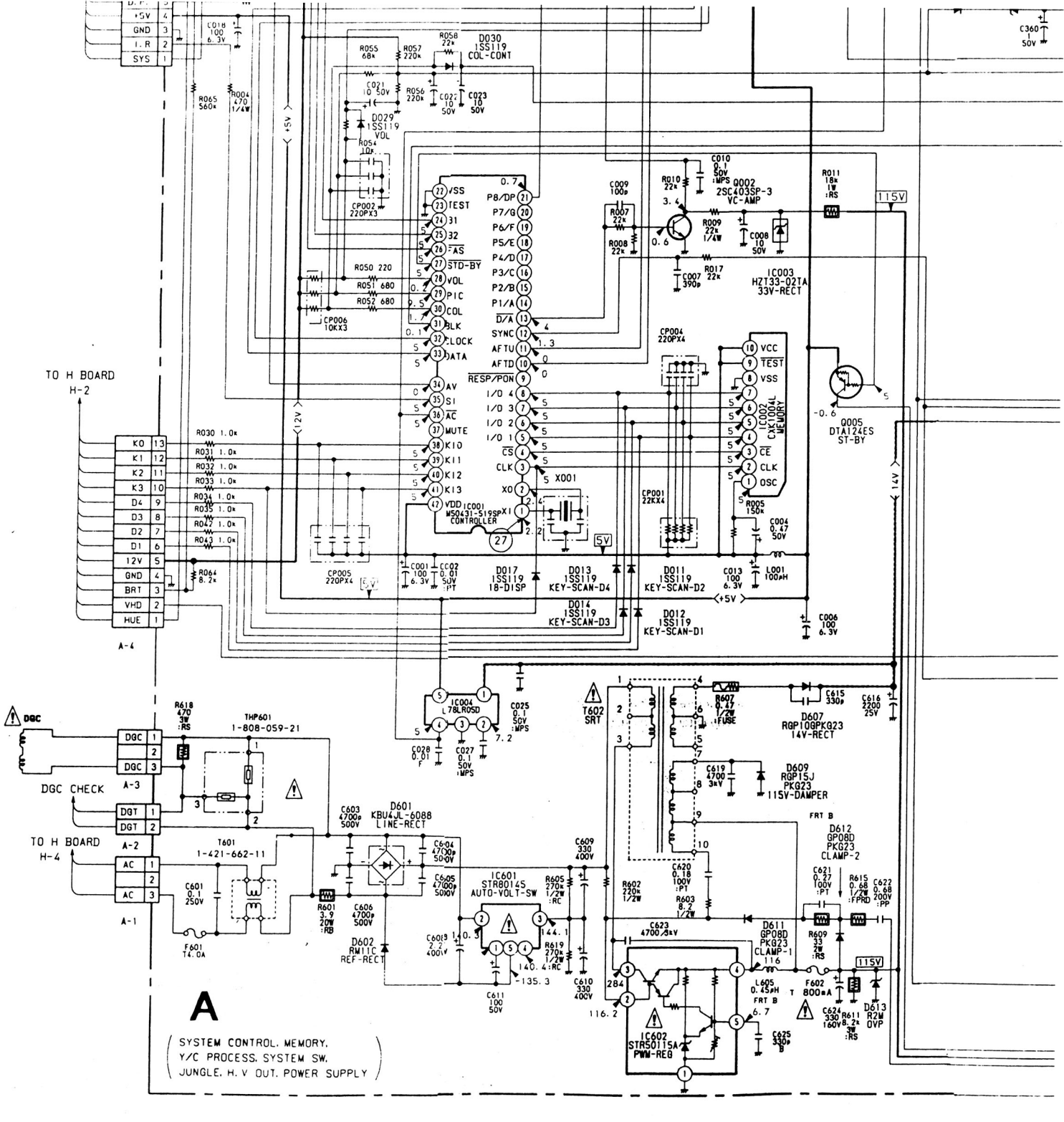
Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

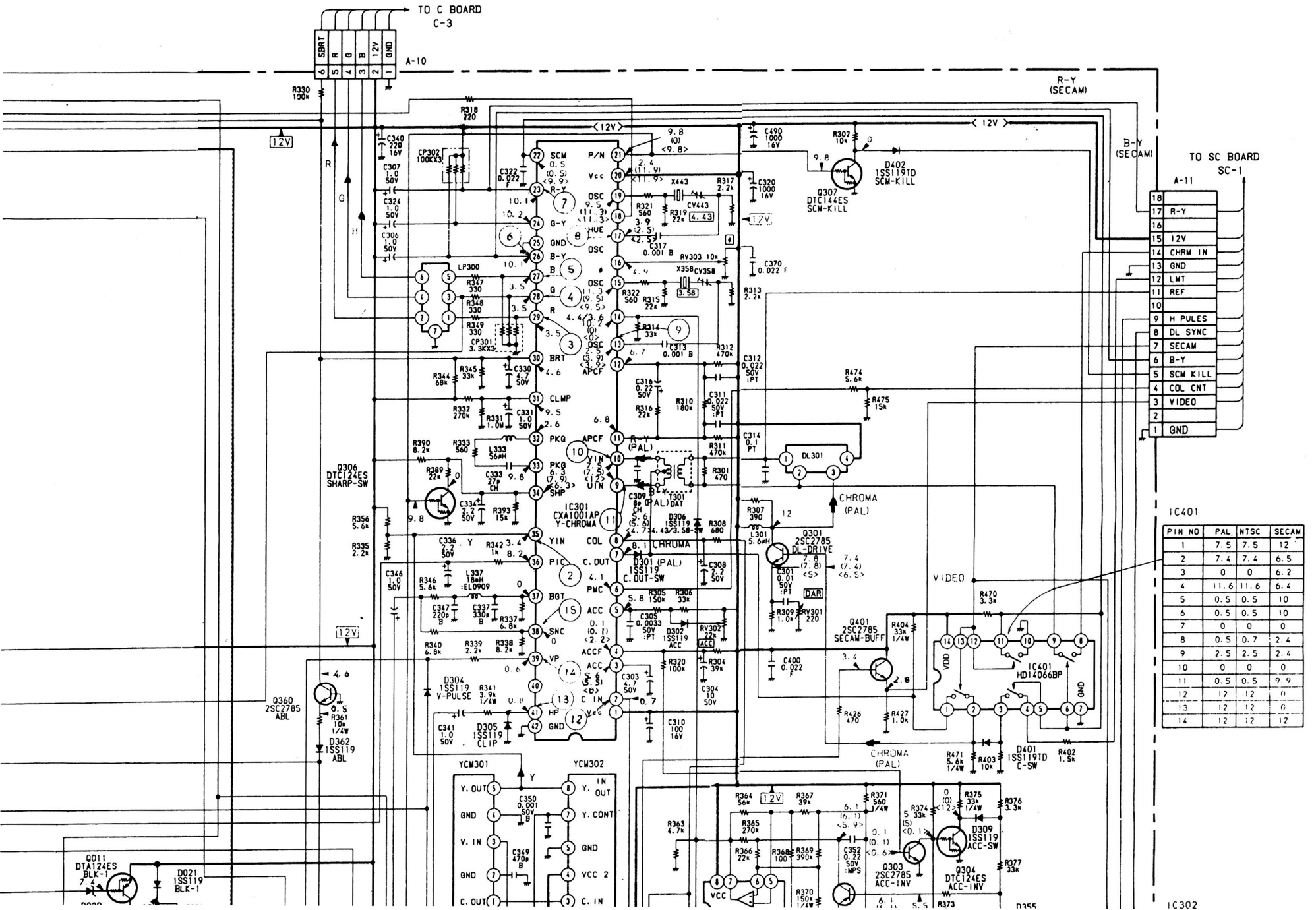


A BOARD

① 1.8 Vp-p (H)	② 0.9 Vp-p (H)	③ 5.2 Vp-p (H)	④ 4.8 Vp-p (H)	⑤ 5.6 Vp-p (H)
⑥ SECAM 1.5 Vp-p (H)	⑦ SECAM 0.9 Vp-p (H)	⑧ 4.43MHZ 0.8 Vp-p ( )	⑨ 3.58MHZ 0.8 Vp-p ( )	⑩ PAL 0.5 Vp-p (H)
⑪ PAL 0.4 Vp-p (H)	⑫ PAL 0.7 Vp-p (H)	⑬ 2.0 Vp-p (H)	⑭ 7.6 Vp-p (V)	⑮ 4.0 Vp-p (H)
⑯ 1.6 Vp-p (H)	⑰ 4.8 Vp-p (H)	⑱ 3.5 Vp-p (H)	⑲ 3.0 Vp-p (V)	⑳ 4.0 Vp-p (V)
㉑ 12.0 Vp-p (V)	㉒ 60.0 Vp-p (V)	㉓ 2.4 Vp-p (H)	㉔ 88.0 Vp-p (H)	㉕ 11.0 Vp-p (H)
㉖ 1100 Vp-p (H)	㉗ 3.8Vp-p (4MHz)			

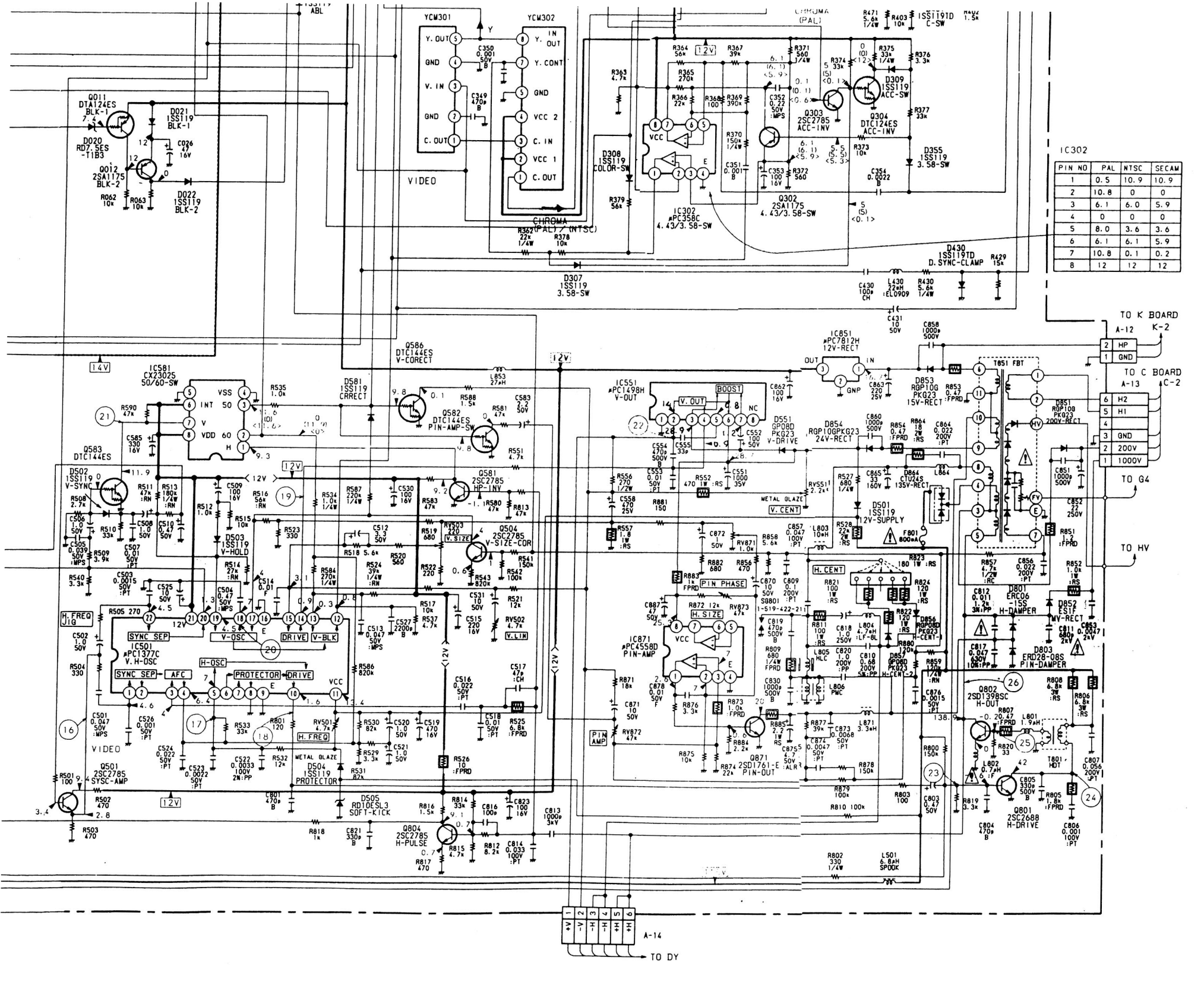

ANT
TU151 BT-886A
AGC VC I II U 12V IF
TO K BOARD
K-1
GND VI-OUT 12V VOL VI-IN GND TV/AV GND SOUND 14V GND
A-7
VIDEO
IF
D151 RD5.6ES-T1B2 AGC
L151 12μH
C020 100 16V
R155 470
C154 10 50V
TP15 AGC
12V
IC151 LA7920 BAND-SW
C157 0.068 50V :MPS
R154 470 1/4W
C156 33 16V
R152 330k
R153 10k
C151 1.0 50V
R151 22k
C158 0.068 50V :MPS
C155 33 16V
Q151 2SC2785 VC-FILTER
C152 1.0 50V
C153 1.0 50V
IF201 IFC-380
RF AGC IF IN VCC AFT UP AFT DN AFT OUT VOL AF OUT AF IN DE-EMPH SYSTEM DET OUT
R205 33k
R210 33k
C210 4700p B
C202 0.47 50V
C203 47 16V
R207 22k
R206 22k 1/4W
IC201 NJM78M07A 9V-REC
VIDEO
L004 22μH :EL0909
R015 2.2k
C012 1000p
C019 560p B
C016 56p CH
C015 56p CH
L003 18μH
R037 100
C014 33 16V
IC005 CX7958 CHARA-DISPRA
VSS H V INH CLK DAT CS G.OUT RESET VSS
L002 1μH
C005 180p
C011 180p
X002 11-567-686-11
IC006 MB88202H-605 SUB-CONTROLL
VSS EX X R10 R9 R8 R7 R6 R0 R1 R2 R3 R4 R5 RESET VCC
R038 10k 1/4W
R021 1k
C017 0.01 50V :MPS
5V
R006 10k
Q003 DTC124ES V-PULSE
Q030 2SC2785 ON-SCREEN
C031 1 50V
R072 47k
C032 100p 50V B
R073 15k
R074 220
L030 10μH
R039 4.7k 1/4W
R040 4.7k
D360 1SS119 ABL-1
D361 RD7.5ESB3 ABL-2
R360 10k
C360 1 50V
TO H BOARD
H-1
D.P. +5V GND I.R SYS
R029 470
C018 100 6.3V
R065 560k
R004 470 1/4W
R055 68k
R057 220k
R058 22k
D030 1SS119 COL-CONT
C021 10 50V
R056 220k
C022 10 50V
C023 10 50V
D029 1SS119 VOL
R054 10k
+5V
C010


+5V
GND
I.R
SYS
C018 100 6.3V
R055 68k
R057 220k
R058 22k
D030 1SS119 COL-CONT
C021 10 50V
R056 220k
C022 10 50V
C023 10 50V
D029 1SS119 VOL
R054 10k
CP002 220PX3
R065 560k
R004 470 1/4W
+5V
R050 220
R051 680
R052 680
CP006 10KX3
VSS
TEST
31
32
AS
STD-BY
VOL
PIC
COL
BLK
CLOCK
DATA
AV
SI
AC
MUTE
KI0
KI1
KI2
KI3
VDD
IC001 M50431-519SP CONTROLLER
P8/DP
P7/G
P6/F
P5/E
P4/D
P3/C
P2/B
P1/A
D/A
SYNC
AFTU
AFTD
RESP/PON
I/O 4
I/O 3
I/O 2
I/O 1
CS
CLK
XO
XI
X001
C009 100p
R010 22k
C010 0.1 50V :MPS
Q002 2SC4035P-3 VC-AMP
R007 22k
R008 22k
R009 22k 1/4W
C008 10 50V
R017 22k
C007 390p
ICO03 HZT33-02IA 33V-RECT
R011 18k 1W :RS
115V
CP004 220PX4
IC002 CXK1004L MEMORY
VCC
TEST
VSS
CE
CLK
OSC
R005 150k
C004 0.47 50V
CP001 22KX4
Q005 DTA124ES ST-BY
TO H BOARD H-2
KO
K1
K2
K3
D4
D3
D2
D1
12V
GND
BRT
VHD
HUE
A-4
R030 1.0k
R031 1.0k
R032 1.0k
R033 1.0k
R034 1.0k
R035 1.0k
R042 1.0k
R043 1.0k
R064 8.2k
CP005 220PX4
5V
12V
14V
C001 100 6.3V
C002 0.01 50V :PT
D017 1SS119 18-DISP
D013 1SS119 KEY-SCAN-D4
D014 1SS119 KEY-SCAN-D3
D011 1SS119 KEY-SCAN-D2
D012 1SS119 KEY-SCAN-D1
C013 100 6.3V
L001 100μH
C006 100 6.3V
IC004 L78L05D
C025 0.1 50V :MPS
C028 0.01 F
C027 0.1 50V :MPS
T602 SRT
C615 330p
C616 2200 25V
R607 0.47 1/2W :FUSE
D607 RGP10GPKG23 14V-RECT
C619 4700 3kV
D609 RGP15J PKG23 115V-DAMPER
FRT B
D612 GP08D PKG23 CLAMP-2
C620 0.18 100V :PT
R603 8.2 1/2W
C621 0.27 100V :PT
R615 0.68 1/2W :FPRD
C622 0.68 200V :PP
R602 220k 1/2W
C623 4700 3kV
D611 GP08D PKG23 CLAMP-1
R609 33 2W :RS
115V
L605 0.45μH FRT B
F602 800mA T
C624 330 160V
R611 8.2k 3W :RS
D613 R2M OVP
C625 330p
IC602 STR50115A PWM-REG
DGC
R618 470 3W :RS
THP601 1-808-059-21
DGC
DGC CHECK
DGT
TO H BOARD H-4
AC
A-3
A-2
A-1
T601 1-421-662-11
C601 0.1 250V
F601 T4.0A
C603 4700p 500V
D601 KBU4JL-6088 LINE-RECT
C604 4700p 500V
C605 4700p 500V
C606 4700p 500V
R601 3.9 2W :RB
D602 RW11C REF-RECT
IC601 STR80145 AUTO-VOLT-SW
R605 270k 1/2W :RC
R619 270k 1/2W :RC
C608 2.2 400V
C609 330 400V
C610 330 400V
C611 100 50V
R606 220k 1/2W
A
SYSTEM CONTROL, MEMORY, Y/C PROCESS, SYSTEM SW, JUNGLE, H. V OUT, POWER SUPPLY



PIN NO	PAL	NTSC	SECAM
1	7.5	7.5	12
2	7.4	7.4	6.5
3	0	0	6.2
4	11.6	11.6	6.4
5	0.5	0.5	10
6	0.5	0.5	10
7	0	0	0
8	0.5	0.7	2.4
9	2.5	2.5	2.4
10	0	0	0
11	0.5	0.5	9.9
12	12	12	0
13	12	12	0
14	12	12	12

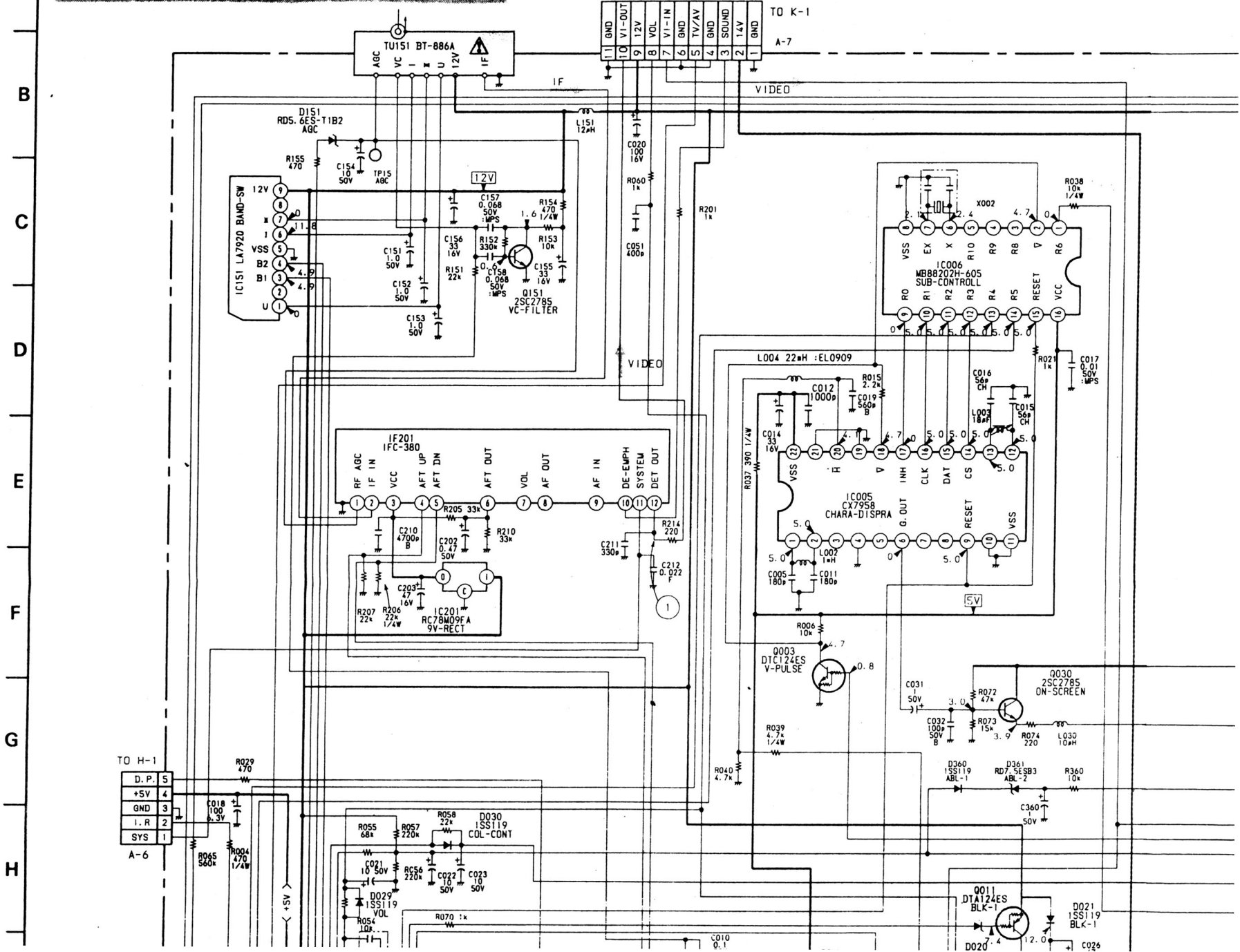
IC401

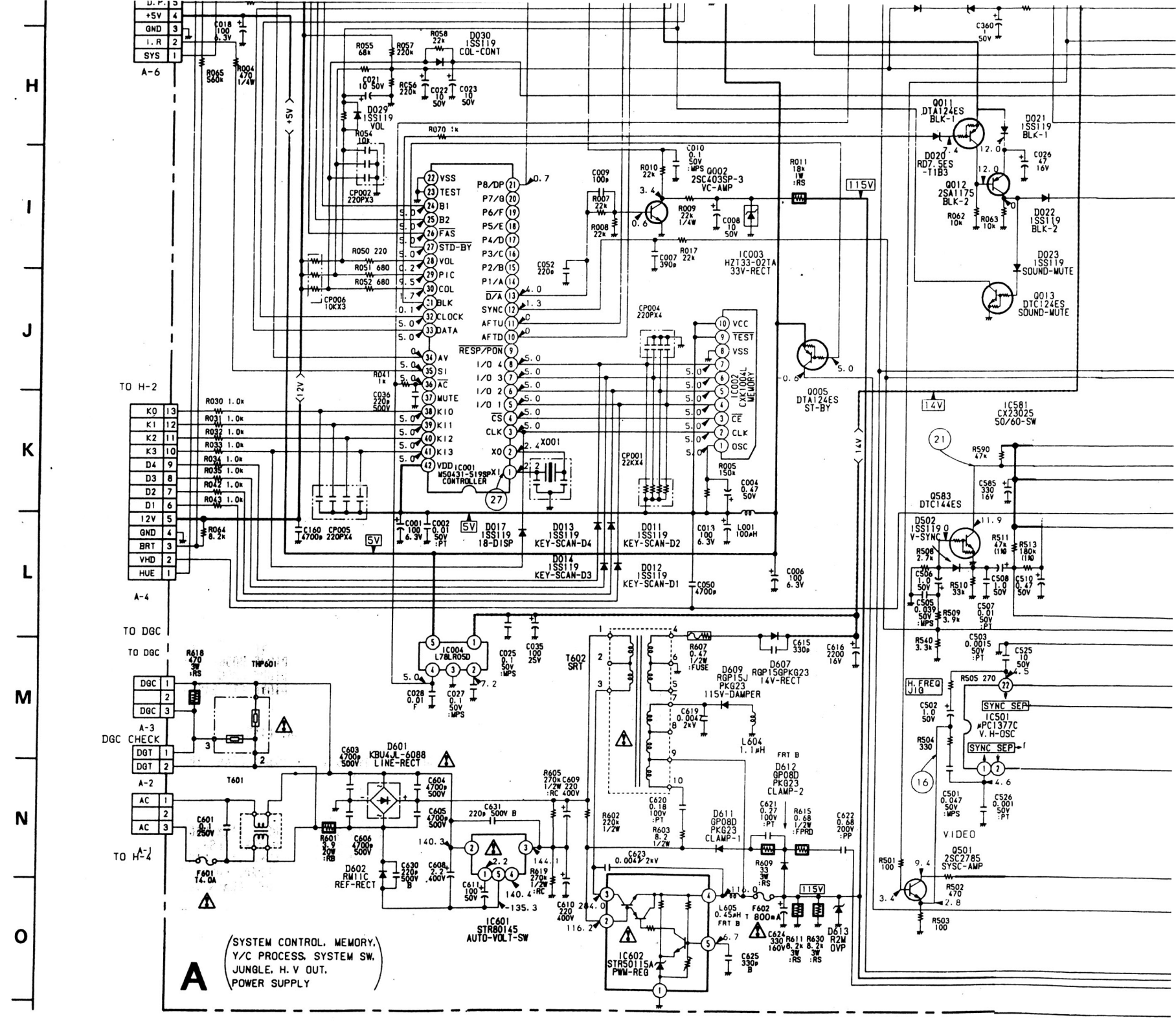

IC302
PIN NO | PAL | NTSC | SECAM
1 | 0.5 | 10.9 | 10.9
2 | 10.8 | 0 | 0
3 | 6.1 | 6.0 | 5.9
4 | 0 | 0 | 0
5 | 8.0 | 3.6 | 3.6
6 | 6.1 | 6.1 | 5.9
7 | 10.8 | 0.1 | 0.2
8 | 12 | 12 | 12
TO K BOARD
TO C BOARD
TO G4
TO HV
TO DY
VIDEO
CHROMA (PAL) / (NTSC)
IC581 CX23025 50/60-SW
IC501 #PC1377C V.H-OSC
IC551 #PC1498H V-OUT
IC851 #PC7812H 12V-RECT
IC871 #PC4558D PIN-AMP
Q501 2SC2785 SYSC-AMP
Q502 DTC144ES V-SYNC
Q503 DTC144ES
Q504 2SC2785 V-SIZE-COR
Q581 2SC2785 HP-INV
Q582 DTC144ES PIN-AMP-SW
Q583 DTC144ES
Q586 DTC144ES V-CORECT
Q801 2SC2688 H-DRIVE
Q802 2SD1398SC H-OUT
Q804 2SC2785 H-PULSE
Q871 2SD1761-E PIN-OUT
Q302 2SA1175 4.43/3.58-SW
Q303 2SC2785 ACC-INV
Q304 DTC124ES ACC-INV
D501 1SS119 12V-SUPPLY
D503 1SS119 V-HOLD
D505 RD10ESL3 SOFT-KICK
D801 ERC06-15S H-DAMPER
D803 ERD28-08S PIN-DAMPER
D851 RGP10B PKG23 200V-RECT
D853 RGP10G PKG23 15V-RECT
D854 RGP10GPKG23 24V-RECT
D855 CTU24S 135V-RECT
D857 GP06D PKG23 H-CENT-2
D858 RGP06D PKG23 H-CENT
D551 GP08D PKG23 V-DRIVE
T851 FBT
T801 HOT
L801 9μH
L802 0.7μH
L803 10μH
L804 4.7μH LF-BL
L805 HLC
L806 PWC
L871 3.3μH
F801 800mA
SPOOK
PIN PHASE
H.SIZE
H.CENT
V.SIZE
V.CENT
V.LIN
V-BLK
V-OSC
H-OSC
SYNC SEP
AFC
PROTECTOR
DRIVE
H.FREQ
METAL GLAZE
PIN AMP
BOOST
ABL
D307 1SS119 3.58-SW
D308 1SS119 COLOR-SW
D309 1SS119 ACC-SW
D355 1SS119 3.58-SW
D430 1SS119TD D.SYNC-CLAMP
D021 1SS119 BLK-1
D022 1SS119 BLK-2
D020 RD7.5ES -T1B3
Q011 DTA124ES BLK-1
Q012 2SA1175 BLK-2

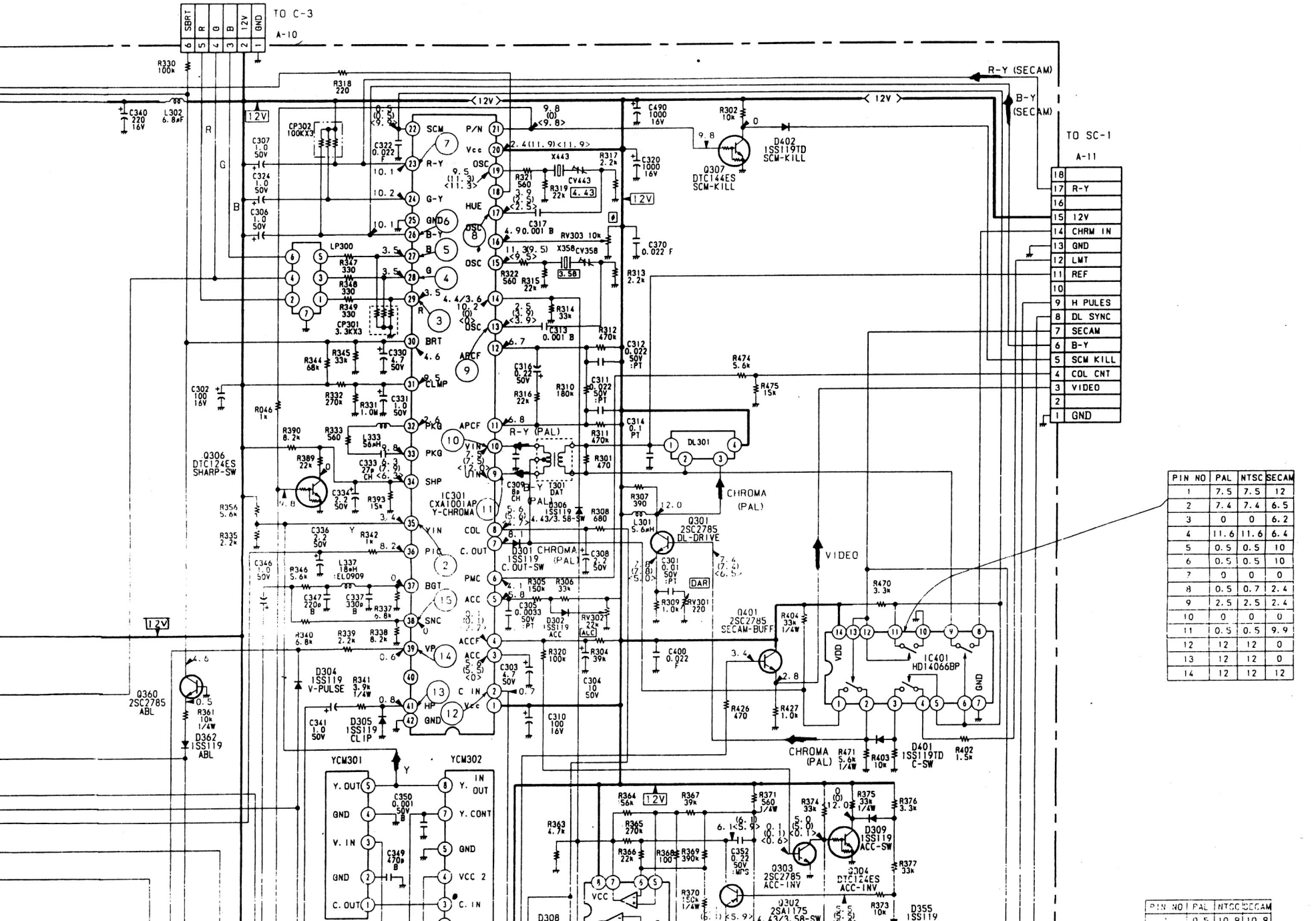
KV-2162M9 SUPPLEMENT-1

INTRODUCTION

- A board modification

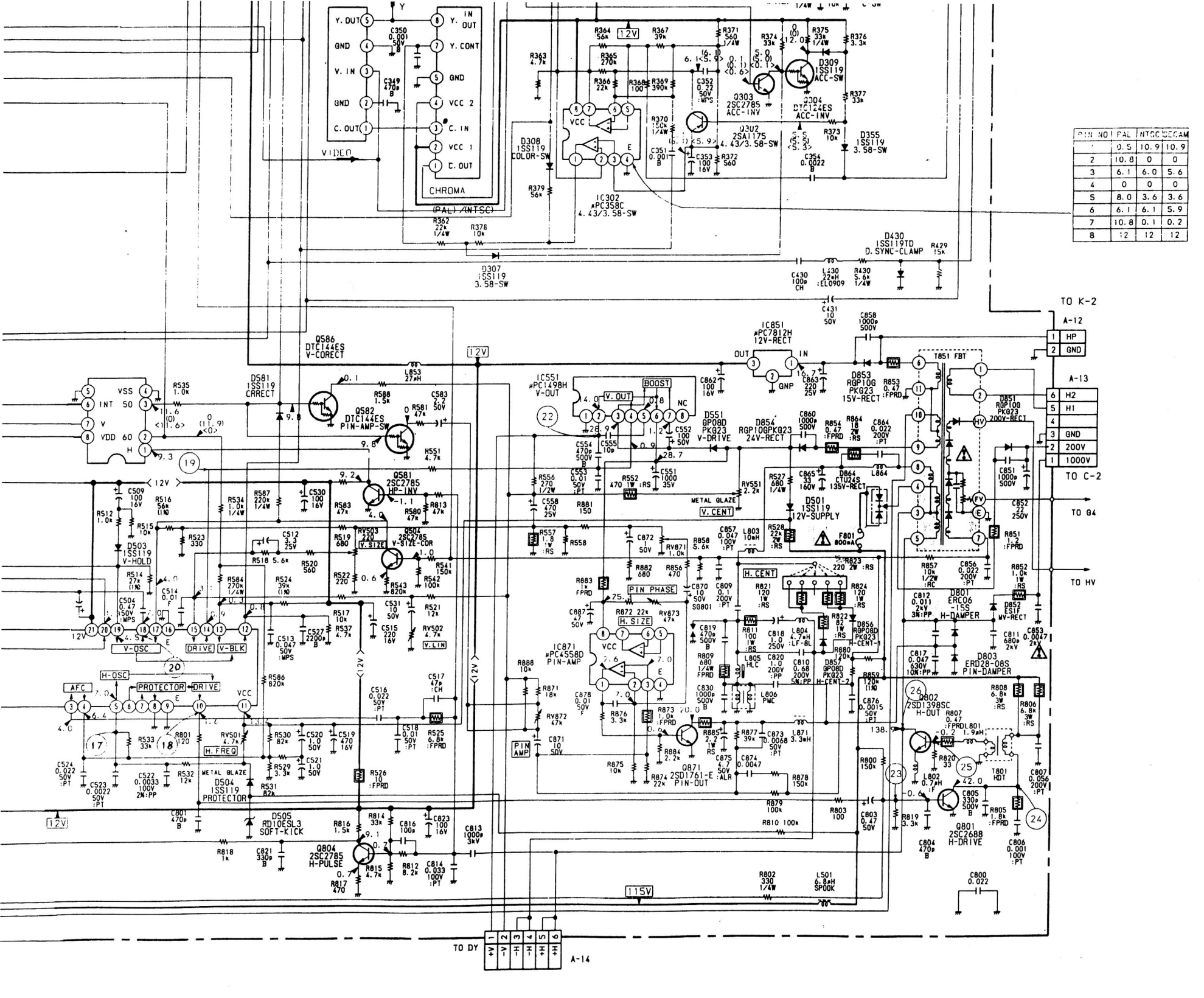



A
(SYSTEM CONTROL, MEMORY, Y/C PROCESS, SYSTEM SW, JUNGLE, H.V OUT, POWER SUPPLY)
IC601 STR80145 AUTO-VOLT-SW
IC602 STR50115A PWM-REG
IC001 M50431-519SP CONTROLLER
IC002 CXK1002 CMOS RAM
IC003 HZ133-02TA 33V-RECT
IC004 L78L05SD
IC501 APC1377C V.H-OSC
IC581 CX23025 50/60-SW
Q002 2SC4035P-3 VC-AMP
Q005 DTA124ES ST-BY
Q011 DTA124ES BLK-1
Q012 2SA1175 BLK-2
Q013 DTC124ES SOUND-MUTE
Q501 2SC2785 SYSC-AMP
Q583 DTC144ES
D030 1SS119 COL-CONT
D029 1SS119 VOL
D017 1SS119 18-DISP
D013 1SS119 KEY-SCAN-D4
D014 1SS119 KEY-SCAN-D3
D012 1SS119 KEY-SCAN-D1
D011 1SS119 KEY-SCAN-D2
D021 1SS119 BLK-1
D022 1SS119 BLK-2
D023 1SS119 SOUND-MUTE
D020 RD7.5ES -T1B3
D601 KBU4JL-6088 LINE-RECT
D602 RW11C REF-RECT
D607 RGP15GPKG23 14V-RECT
D609 RGP15J PKG23 115V-DAMPER
D611 GP08D PKG23 CLAMP-1
D612 GP08D PKG23 CLAMP-2
D613 R2M OVP
T601
T602 SRT
L604 1.1μH
L605 0.45μH
F601 T4.0A
F602 800mA
TNP601
TO H-2
TO H-4
TO DGC
DGC CHECK
115V
14V
12V
5V
VIDEO
H.FREQ JIG
SYNC SEP
V-SYNC



PIN NO	PAL	NTSC	SECAM
1	7.5	7.5	12
2	7.4	7.4	6.5
3	0	0	6.2
4	11.6	11.6	6.4
5	0.5	0.5	10
6	0.5	0.5	10
7	0	0	0
8	0.5	0.7	2.4
9	2.5	2.5	2.4
10	0	0	0
11	0.5	0.5	9.9
12	12	12	0
13	12	12	0
14	12	12	12

PIN NO	PAL	NTSC	SECAM
1	0.5	10.8	10.8



PIN NO.	PAL	NTSC	SECAM
1	0.5	10.9	10.9
2	10.8	0	0
3	6.1	6.0	5.6
4	0	0	0
5	8.0	3.6	3.6
6	6.1	6.1	5.9
7	10.8	0.1	0.2
8	12	12	12